UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,225	04/13/2004	Brian T. Edgar	STL11600	4622

7590   04/19/2007

Seagate Technology LLC
1280 Disc Drive
Shakopee, MN 55379

EXAMINER
TRUONG, LOAN

ART UNIT	PAPER NUMBER
2114	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/823,225	BLOOMINGTON ET AL.
	Examiner	Art Unit	
	LOAN TRUONG	2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>08 January 2007</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-22</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) <u>22</u> is/are allowed.

6) ☐ Claim(s) <u>1,6,10,16 and 19-21</u> is/are rejected.

7) ☒ Claim(s) <u>2-5,7-9,11-15,and 17-18</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to claims 1, 6, 10 and 16 have been considered

but are moot in view of the new ground(s) of rejection.

2.   Applicant's arguments with respect to claims 19-21 have been fully considered

but they are not persuasive.

In regard to claim 19, applicant stated that Eckenrode does not disclosed or

suggest reading data into a memory, changing at least some of the data to form corrupted

data and passing the corrupted data as the data read from the storage medium.

Eckenrode disclosed the two modes of error injection by the EI state machine (*col. 4 lines

4-25*).   One mode is frame status injection and the other is full error injection.   Frame

status injection changes the R/S status bits of the data stream being transmitted in the

buffer therefore equating to the method of changing at least some of the data and passing

the corrupted data.

In regard to claim 20, applicant stated that Dennis fails to disclose the limitation

of receiving an indication that a false timeout error should be generated during execution

of a command.   Dennis however do teach of a time out period where the peripheral is

expected to be processing data and is out of communication with the host computer (*col.

24 lines 35-40*).   If the peripheral is out of communication with the host computer for

more than the predetermined timeout period, the host computer assumes that an error

condition exists (*col. 24 lines 40-43*).   Furthermore, applicant stated that Dennis does not

seem to address a stopping command without indicating that processing of the command

has stopped.   Dennis does teach that once a print engine has started, it cannot stop

printing the page or an error will occur.   An error signal is not a stop, cancel or abort

signal indicating the printer to stop the current print job.   But an error signal does stall or

interrupt the current job until the error is resolve there by equate by the examiner as a

stopping command without indicating that processing has stopped.

Claims 21 are rejected (see rejection below).

For these reasons, the rejections on claim 19-21 are maintained.

Allowable Subject Matter

3.   Claim 22 is allowed.

The following is an examiner's statement of reasons for allowance: The examiner

deem claim 22 as novel when read as a whole for the limitations of receiving a command

at a storage device to generate a false error, where the command comprising at least one

sense parameter and generating a false error message from the storage device indicating

that an error has occurred when it has not occurred wherein the false error message

describing the error in part by including at least one sense parameter.

Any comments considered necessary by applicant must be submitted no later than

the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on

Statement of Reasons for Allowance."

4.   Claims 2-5, 7-9, 11-15 and 17-18 are objected to as being dependent upon a

rejected base claim, but would be allowable if rewritten in independent form including all

of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

        The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> ((b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5.   Claims 1, 6, 10 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by

Emberty et al. (US 5,796,938).

        In regard to claim 1, Emberty et al. disclosed a method comprising the steps of:

        receiving a command at a device (*target device, fig. 1, 11*) through a sequencer

that controls interactions (*time error sequence, fig. 4, type 0, col. 5 lines 1-4*) on a small

computer system interface bus (*SCSI interface, fig. 1 and 2*);

        programming the sequencer (*SCSI fault simulator, fig. 2, 15*) to interrupt a co-

processor before executing the command (*Trigger flow chart, fig. 4*); and

        executing a set of instructions (phase of operation or pattern of bits supplied by

the user at controller, fig. 4, 16, col. 4 lines 1-4) on the co-processor (SCSI target, fig. 2,

10) based on a stored error mode page so that a false error condition is generated

(p=phase to inject error, fig. 4).

In regard to claim 6, Emberty et al. disclosed the method of claim 1 wherein executing a set of instructions comprises replacing the command with an illegal command (*phase of operation of the SCSI interface supplied by the user at controller to forced an error, col. 3 lines 9-15 and col. 4 lines 1-4*).

In regard to claim 10, Singh et al disclosed a device comprising:

a sequencer adapted to be connected to a small computer system parallel interface bus (*SCSI fault simulator having the ability to provide SCSI fault simulation within a complete system or subsystem, col. 3 lines 9-15)*);

a co-processor (*controller, fig. 2, 16*), coupled to the sequencer (*SCSI fault simulator, fig. 2, 15*) and capable of being interrupted by the sequencer and of providing instructions to the sequencer (*phase of operation or pattern of bits supplied by the user at controller, fig. 4, 16, col. 4 lines 1-4*); and

an instruction storage component (*error injector controlling PC, fig. 6*) communicatively connected to the co-processor (*controller, fig. 2, 16*) and containing processor-executable instructions (*SCSI error injector, fig. 6, 95*) that are designed to initiate an error condition (*phase of operation or pattern of bits supplied by the user at controller, fig. 4, 16, col. 4 lines 1-4*) after the sequencer sends an interrupt to the co-processor (*controller, fig. 2, 16*).

In regard to claim 16, Singh et al. disclosed the device of claim 10 wherein the processor-executable instructions further comprise instructions for replacing a command

with an illegal command (*phase of operation of the SCSI interface supplied by the user at controller to forced an error, col. 3 lines 9-15 and col. 4 lines 1-4*).

****

6.   Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by Eckenrode et al. (US 5,363,379).

In regard to claim 19, Eckenrode et al. disclosed a method comprising:

receiving a command to generate a false data miscompare error (*error injection scheme, fig. 1*);

reading data from a storage medium into a memory (*Ram buffer access by RBC/DPC, fig. 1, 22*);

changing at least some of the data in the memory to form corrupted data (*switching transfer data from Shadow Ram with data in Error injection Ram, col. 3 lines 16-33*); and

passing the corrupted data as the data read from the storage medium (*Error injection data is sent out to the media, col. 3 lines 16-33*).

****

7.   Claims 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Dennis et al. (US 5,471,564).

In regard to claim 20, Dennis et al. disclosed a method comprising:

receiving an indication that a false timeout error should be generated during execution of a command (*host computer system indicate a timeout period as an error condition, col. 24, lines 35-58*);

receiving the command (*printer and other peripheral process data, col. 24 lines 35-40*);

processing a portion of the command (*printer is out of communication with the host computer for more than the predetermine amount of time, col. 24 lines 35-58*); and

stopping the processing of the command before completing the command without indicating that processing of the command has stopped (*generates an error message any time the arbitrary timeout period is exceeded, col. 24 lines 35-58*).

In regard to claim 21, Dennis et al. disclosed the method of claim 20 wherein receiving a command comprises receiving a read command and wherein processing a portion of the command comprises transferring data (*processing data, col. 24 lines 35-58*).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Loan Truong whose telephone number is (571) 272-2572. The examiner can normally be reached on M-F from 8am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number
for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR. Status
information for unpublished applications is available through Private PAIR only. For
more information about the PAIR system, see http://pair-direct.uspto.gov. Should you
have questions on access to the Private PAIR system, contact the Electronic Business
Center (EBC) at 866-217-9197 (toll-free).

Loan Truong
Patent Examiner
AU 2114

SCOTT BADERMAN
SUPERVISORY PATENT EXAMINER